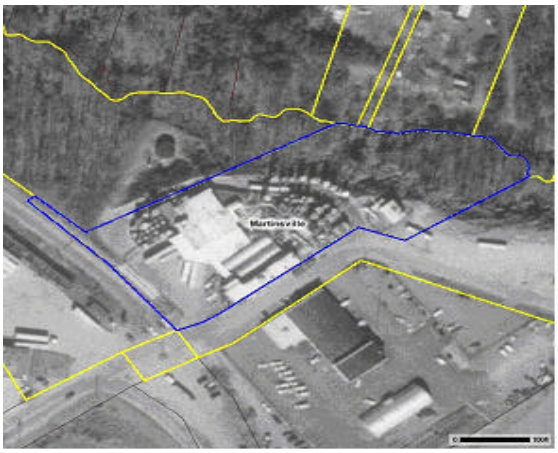
Region 3 GPRA 2008 Baseline RCRA Corrective Action Facility

Univar USA Inc. Facility

(Formerly Prillaman Chemical Corporation)

825 Fisher Street
Martinsville, VA 24112
Congressional District 5
EPA ID #: VAD003111416
Last Updated July 6, 2007

Aerial view of facility (approximate property boundaries in blue)



Facility location map

Current RCRA CA Activities

Sitewide corrective action (CA) and closure activities at the Univar USA Inc. (Univar) facility are being conducted under the direction of the Virginia Department of Environmental Quality (DEQ).

The facility's closure activities and CA investigations, interim measures (IMs), and any other necessary site clean up activities are being conducted in accordance with the closure and CA conditions and requirements of the facility's Hazardous Waste Management Permit for Storage and Treatment of Hazardous Waste (Permit). The facility's current Permit authorizes storage and treatment of hazardous waste in containers and tank systems and includes basic CA requirements. The facility's current Permit was issued under the Virginia Hazardous Waste Management Regulations (VHWMR), which incorporates the requirements of the Resource Conservation and Recovery Act (RCRA) Regulations by reference.

The Univar facility is undergoing final closure and sitewide CA investigations to fully assess the nature and extent of releases of hazardous waste and/or hazardous constituents of concern (HCOCs) from the facility's solid waste management units (SWMUs), hazardous waste management units (HWMUs), and other Areas of Concern (AOCs). The release of HCOCs to the environment was discovered during

closure of the facility's HWMUs under the facility's Permit. The initial closure and CA site investigations have determined that the release of HCOCs has adversely impacted the soils, subsoils, groundwater, and surface water at the site.

Past 24 Months

The facility formally submitted a Class 3 permit modification request to the DEQ by correspondence, dated September 1, 2005, for the approval of three primary administrative permit actions as follows:

1. The design, construction, installation, and operation of two IMs at the site.

2. The incorporation of the CA Permit Modules and Attachments and requirements of the Hazardous and Solid Waste Amendments (HSWA) of the RCRA.

3. The revocation and reissuance of the facility's Permit for a new 10-year period to conduct CA and complete closure activities at the site.

A permit application fee of $56,180 was received by the DEQ on September 26, 2005, for the Class 3 permit modification request and the pending permit application submittal for revocation and reissuance of the facility's Permit. The above three separate administrative actions were initially consolidated into one administrative permit action and submitted under the Class 3 permit modification request as the applicable administrative requirements and the corresponding permit application fee for a Class 3 permit modification would sufficiently satisfy the administrative and permit application fee requirements for all of the above three items.

The two IMs that were initially planned to be implemented at the facility under this permit modification request are: 1) *Interim Measures (IM) Plan (Stream Area)*, and 2) *IM Soil Vapor Extraction (SVE) Design and Work Plan*.

The *IM Plan Stream Area*, dated June 3, 2005, was submitted to the DEQ by Innovative Engineering Solutions, Inc. (IESI), on behalf of Univar. On July 8, 2005, IESI submitted correspondence which provided the DEQ with documented modifications to the *IM Plan (Stream Area)*. Component parts of the *IM Plan (Stream Area)* include the following: 1) *Sampling and Analysis Plan – IM Plan (Stream Area)*, dated August 5, 2005, 2) *Surface Water Sampling and Steam Flow Gauging Plan*, dated August 10, 2005, and 3) *Quality Assurance Project Plan (QAPP)*, dated August 16, 2005.

An *IM Soil Vapor Extraction (SVE) Pilot Test Work Plan*, dated July 8, 2005, and an Air Permit Exemption Application for the SVE pilot test was submitted to the DEQ's West Central Regional Office (WCRO), Air Permit Program, by correspondence from Univar, dated July 13, 2005. Correspondence from Dr. Michael J. Scanlan, Air Permit Manager, WCRO, DEQ, dated July 19,

2005, approved the *(SVE) Pilot Test Work Plan* and indicated that the proposed pilot test was exempt from the (air) permit requirements. The DEQ's Office of Waste Permitting (OWP) correspondence, dated July 22, 2005, provided concurrence regarding the implementation of the *IM SVE Pilot Test Work Plan*, dated July 8, 2005, with a condition of approval.

The *IM SVE Pilot Test Work Plan* was intended to provide information needed to finalize the design of the source area IM SVE remediation system and to allow Univar and Bascor Environmental, Inc. (BEI) to determine whether air emission treatment components are necessary to comply with the regulatory requirements of the Air Permitting Program under the Regulations for the Control and Abatement of Air Pollution, and the Office of Hazardous Waste Permitting Program under the VHWMR and the RCRA Regulations.

Univar implemented the public notice for the Class 3 permit modification request in accordance with the requirements of the VHWMR, and the RCRA under 40 CFR § 270.42(c), and §124.31. On September 9, 2005, a public notice was published in *Martinsville Bulletin* of the Class 3 permit modification request and the public meeting at the Martinsville High School on October 25, 2005. In addition, the facility announced the public meeting and the Class 3 permit modification request by letter mailings to the people and organizations on the permitted facility's mailing lists and to property owners that are contiguous to the Univar facility. The public notice was also announced on WHEE radio in Martinsville on September 25, 2005, during the drive time hours in the morning and the evening.

At the public meeting, the Univar representatives and the DEQ representatives provided information associated with the administrative, technical, and regulatory issues and process associated with the Class 3 permit modification request for the following: 1) to install the two IMs, 2) to incorporate the CA Permit Modules and Attachments and requirements of the HSWA of the RCRA, and 3) to revoke and reissue the permit for a new 10-year period to conduct CA and complete closure activities at the site.

The public meeting also served to present the Community Relations Plan (CRP) for CA to the general public and the community. The DEQ provided conditional approval of the CRP, dated June 30, 2005, by correspondence, dated July 21, 2005. The CRP is a component part of CA at the facility and will be a required component part of the facility's forthcoming RCRA Facility Investigation (RFI) Work Plan under the Facility's Permit.

No written comments were received by the DEQ or Univar during the public meeting or during the public notice period. However, there were many general questions from the general public regarding the CA findings at the site and general questions regarding two other nearby sites previously owned by the Prillaman Chemical Corporation (former owner of the subject Univar facility).

Mr. James P. Hooper, on behalf of Michael Gaudette, Senior Project Manager, Univar USA, Inc., submitted correspondence to the DEQ, dated December 9, 2005, requesting that the Director grant the

temporary authorization for the implementation of the *IM Plan (Stream Area)*. This temporary authorization request by the Permittee is in accordance with the VHWMR and the RCRA Regulations under 40 CFR § 270.42(e).

On December 16, 2005, Univar was sent correspondence to provide the DEQ's conditional approval and temporary authorization for the implementation of the *IM Plan (Stream Area)* for CA under the facility's Permit. This temporary authorization approval allows the facility to construct, install, and operate the *IM Plan (Stream Area)* for CA to mitigate the release of contaminated groundwater at the site so to protect human health and the environment. The initial temporary authorization had a time period of up to 180-days until June 14, 2006. (The temporary authorization for this above IM was reissued by the DEQ on June 9, 2006, for a second 180-day period until December 11, 2006.)

The specific conditions of approval for the *IM Plan (Stream Area)* are delineated in the staff memorandums as follows:

1. Memorandum from Richard J. Criqui, Jr., C.P.S.S., Environmental Engineer Senior, DEQ, dated November 18, 2005, entitled Corrective Action - 1) *IESI IM Plan (Stream Area)*, dated June 3, 2005, as amended by IESI *IM Plan (Stream Area), Modifications*, dated July 8, 2005 – 2) *Sampling and Analysis Plan*, dated August 4, 2005 – 3) *Surface Water Sampling and Stream Flow Gauging Plan*, dated August 10, 2005 – Staff Review Comments – Conditions of Approval.

2. Memorandum from Richard J. Criqui, Jr., C.P.S.S., Environmental Engineer Senior, DEQ, dated December 5, 2005, entitled Corrective Action – *Quality Assurance Project Plan (QAPP)*, dated August 16, 2005 – Staff Review Comments – Conditions of Approval.

As delineated in the above staff review comments and conditional approval memorandums, Univar/BEI was to provide specified submissions to the DEQ along with the specified revisions to the above submitted documents. These specified revisions were required prior to implementation and construction of the *IM Plan (Stream Area)*. It should be noted that component parts of the *QAPP* also provides information that is applicable to the *SVE Pilot Test Work Plan* and future *IM SVE Design and Work Plan* and component parts of the *QAPP* required review and approval by the Air Permitting Program of the WCRO.

It was indicated that the DEQ would provide a letter of confirmation when the specified submissions and revisions to the submitted documents were considered in accordance with the conditions of approval for the above temporary authorization.

Bascor Environmental, Inc. (BEI) submitted a revised *QAPP*, dated January 19, 2006, with further revisions, dated January 30, 2006.

The DEQ's correspondence, dated February 8, 2006, provided the confirmation letter that the revised *QAPP*, dated January 19, 2006, with revisions, dated January 30, 2006, met item No. 2 of the conditions of approval of the temporary authorization for implementation of the *IM Plan (Stream Area)*.

Innovative Engineering Solutions, Inc. (IESI) provided two CA submittals regarding the *IM Plan (Stream Area)* on behalf of Univar USA, Inc. as follows:

1. IESI correspondence, dated March 2, 2006, *IM Plan (Stream Area), Update and Draft Final Design.*

2. IESI correspondence, dated March 9, 2006, *IM Plan (Stream Area), Sampling and Analysis Plan Modifications.*

The DEQ sent Univar correspondence, dated April 5, 2006, with review comments regarding the above two IESI submittals. The DEQ's review comments were delineated in enclosed memorandums as follows:

1. Memorandum from Richard J. Criqui, Jr., Environmental Engineer Senior, DEQ, dated March 30, 2006, entitled IESI Letter/Submittal, dated March 2, 2006, Regarding Update of Design of IM Plan (Stream Area) - Staff Review Comments – Outstanding Items Remaining of Conditional Approval of the Temporary Authorization of the IM Plan (Stream Area), dated December 16, 2005.

2. Memorandum from Richard J. Criqui, Jr., Environmental Engineer Senior, DEQ, dated March 28, 2006, entitled IESI Letter/Submittal, dated March 9, 2006, Regarding Revision of SAP - Staff Review Comments.

In response to the DEQ's correspondence, dated April 5, 2006, and enclosed memorandums, IESI submitted correspondence and enclosures, dated May 17, 2006, and May 31, 2006, which provided the following:

1. IESI correspondence, dated May 17, 2006, provided itemized response comments, revised plans and specifications, and other delineated information to address the DEQ's correspondence, dated April 5, 2006, and enclosed memorandums dated March 28 and March 30, 2006.

2. *Sampling Analysis Plan for IM Plan (Stream Area)*, dated August 2005, and Revised May 5, 2006.

3. *Operation and Maintenance Manual for IM Plan (Stream Area)*, dated May 2006.

4. IESI correspondence, dated May 31, 2006, provided minor revisions and clarifications regarding the IESI submittals provided on May 17, 2006.

The DEQ's correspondence, dated June 2, 2006, provided documentation that the submittals by IESI, dated May 17, 2006, were considered complete with the minor revisions provided in the IESI submittal, dated May 31, 2006. Thus, the DEQ's June 2, 2006, correspondence to Univar provided the confirmation letter that the above submissions by IESI were deemed sufficient to meet the remaining requirements of the conditions of approval of the temporary authorization, dated December 16, 2005, regarding the *IM Plan (Stream Area)*. Therefore, Univar was provided the authorization to construct, install, and operate the *IM Plan (Stream Area)* for CA under the temporary authorization under facility's Permit to mitigate the release of contaminated groundwater at the site.

The *IM Plan (Stream Area)* subsequently received the DEQ's approval for reissuance of the temporary authorization by DEQ correspondence, dated June 9, 2006. The second 180-day term for the IM temporary authorization was from June 15, 2006, through December 11, 2006.

Construction activities for implementation of the *IM Plan (Stream Area)* were initiated in July 2006. (This above IM is designed to mitigate the release of contaminated groundwater at the site to surface waters so to protect human health and the environment.)

On August 22, 2006, Univar submitted the RCRA Permit Application, Parts A and B, for revocation and reissuance of the facility's Permit and to incorporate the IMs and to incorporate the CA Permit Modules and Attachments of the HSWA of the RCRA.

On September 11, 2006, Univar initiated the operation of the *IM Plan (Stream Area*), and the system has operated continuously since September 12, 2006.

On September 13, 2006, the DEQ staff made a site visit to the Univar site and met with facility representatives to inspect the installed equipment and infrastructure of the *IM Plan (Stream Area*) and to discuss specifics of the installed and operating IM.

On October 31, 2006, IESI submitted correspondence to the DEQ with the following: 1) *IM Plan (Stream Area) As–Built Construction Report*, and 2) *IM Plan (Stream Area) Operations and Maintenance (O & M) Manual (As-Built)*, dated October 2006.

On December 1, 2006, the DEQ sent Univar and IESI an e-mail correspondence delineating items of revision needed to the following: 1) *IM Plan (Stream Area) As–built Construction Report*, and 2) *IM Plan (Stream Area) O & M Manual (As-Built),* dated October 2006.

On December 19, 2006, the DEQ provided Univar with the approval of a Class 2 permit modification associated with the design, construction, installation, and operation of the *IM Plan (Stream Area)* for CA under the Univar facility's Hazardous Waste Management Permit (Permit).
The DEQ further evaluated the Class 3 permit modification request and permit revocation and reissuance request submittal, dated September 1, 2005, and has determined that the *IM Plan (Stream Area)* component of the above submittal is a Class 2 permit modification request.
This above IM best fits the classification of a permit modification specified under 40 CFR § 270.42 Appendix I, Section A.4.b.

Therefore, in accordance with the with the VHWMR under 9 VAC 20-60, 9 VAC 20-60-270, and the RCRA Regulations under 40 CFR §270.42(b)(6)(iii), the Director has made a determination to approve the *IM Plan (Stream Area)* as a Class 2 permit modification effective December 19, 2006. The activities authorized under this approval will be conducted as described in the permit modification request and temporary authorization request submissions, as approved, and the IM activities are to be conducted in compliance with all applicable permit conditions and appropriate standards of 40 CFR Part 264.

This IM approval as a Class 2 permit modification allows the facility to continue the IM activities associated with the design, construction, installation, and operation of the *IM Plan (Stream Area)* for CA under the facility's Permit so to mitigate the release of contaminated groundwater at the site so to protect human health and the environment.

In addition to the above IM, an IM *SVE System Design and Work Plan*, dated March 6, 2006, was submitted to the DEQ's Office of Hazardous Waste Permitting (OWHP) and to the DEQ's WCRO Air Permitting Program by BEI correspondence, dated March 6, 2006. The above submittal included the report of the results and findings of the completed SVE Pilot Test. Univar also submitted correspondence, dated March 6, 2006, which requested the Director of the DEQ grant a temporary authorization for implementation of the *IM SVE System Design and Work Plan.*

BEI had also requested the Air Permitting Program's review of the *IM SVE System Design and Work Plan* and their concurrence that the project meets the air permit exemption levels if constructed and operated as described in the above BEI submittal.

On June 19, 2006, the DEQ sent Univar review comments regarding the *IM SVE Design and Work Plan*, dated March 6, 2006. In addition, this above correspondence provided the DEQ's response to the Univar letter, dated March 6, 2006, which requested the Director of the DEQ to grant a temporary

authorization for the construction and implementation of the *IM SVE Design and Work Plan*, dated March 6, 2006, under the facility's Permit.

The DEQ's OHWP determined that additional information needed to be submitted by Univar in order for the DEQ to complete the evaluation of the *IM SVE Design and Work Plan* and to enable a recommendation of approval of a temporary authorization request for construction and implementation of a proposed SVE system. Information that needs to be provided was specified in an enclosed staff review comments memorandum from Richard J. Criqui, Jr., DEQ, dated June 19, 2006.

BEI submitted correspondence, dated July 25, 2006, which provided a response to the DEQ's letter and memorandum, dated June 19, 2006.

DEQ's correspondence, dated August 10, 2006, provided a partial response to BEI correspondence, dated July 25, 2006, to further clarify technical and risk assessment issues and to enable Univar to address the risk assessment and modeling issues and requirements associated with the *IM SVE Design and Work Plan.*

At present, the *IM SVE Design and Work Plan* is pending completion based upon the Permittee's response and resolution of outstanding issues addressed in the DEQ's correspondence and enclosed memorandum, dated June 19, 2006, and the DEQ's subsequent correspondence, dated August 10, 2006. The Permittee must also resolve outstanding issues associated with the requirements of the DEQ's WCRO Air Permitting Program.

On January 29, 2007, a conference call was held with staff from Univar, BEI, George Schewe, a BEI Subcontractor for air modeling, and the DEQ's Office of Hazardous Waste (OHW), and the DEQ's WCRO Air Permitting and Waste Programs, for the purpose of addressing the *IM SVE Design and Work Plan* and outstanding issues associated with the permitting requirements under the Air and Waste Programs. The purpose of the conference call was to discuss the preliminary air modeling results and to discuss the proposed approach for the SVE System design and operation.

Pending submittals to the DEQ's OHW include: 1) the *Air Dispersion Model and Risk Assessment Report*, 2) the updated *IM SVE Design and Work Plan*, 3) the updated SAP/QAPP, and O & M Plan for the SVE System based upon revised final design to the proposed system to address the DEQ's June 19, 2006, memorandum. The pending submittals to the DEQ's WCRO Air Permitting Program include the above information along with the Form 7 Air Permit Application and monitoring program.

On February 15, 2007, a follow-up conference call was held with staff from Univar, BEI, George Schewe, and Sanjay Thirunagari, and Richard Criqui, DEQ, to further discuss the more detailed specific information needs associated with the *Air Dispersion Model and Risk Assessment Report* (hard copies and electronic files of models will be provided).

On June 22, 2007, a follow-up call was held with representatives of BEI to further discuss the progress associated with the completion of the *Air Dispersion Model and Risk Assessment Report*. BEI indicated that the air modeling and risk assessment work is nearing completion and the above noted submittals are anticipated within approximately a month.

BEI correspondence, dated February 16, 2007, was submitted to the DEQ to outline additional subsurface investigation activities proposed for the Univar site. The above proposal was to install additional wells north of the Unnamed Tributary to Mulberry Creek and to the south and east of the former boiler room. The purpose of the investigation is to collect groundwater samples and supplemental information on groundwater flow patterns and quality at the subject site.

On March 16, 2007, a follow-up conference call was held with representatives of Univar, BEI, and the DEQ to discuss the proposal and the DEQ's future expectations and Permit requirements regarding the subsurface investigations under an RFI. The DEQ concurred with the proposed investigation as outlined in the BEI letter, dated February 16, 2007.

Progress Monitoring Reports for the Interim Measure Stream Area were reviewed. The Progress Quarterly Monitoring Reports were prepared by Innovative Engineering Solutions, Inc. (IESI), dated January 2007, and April 2007, and the Stream Gauging and Sampling Report (for August 2005 through December 2006), dated February 14, 2007, was prepared by BEI.

As noted in the Quarterly Progress Monitoring Report, dated January 2007, the monitoring over the start-up period from September – December 2006, provided sufficient data to determine the efficiency of the initially approved and installed IM Stream Area System. The initial monitoring indicated that the system was fairly good at treating (stripping) the VOCs, but the system was not effectively treating the alcohols in the groundwater. IESI concluded that the "sub-par performance" of the remediation system during the first quarter was due to an organic loading problem to the treatment system and this was due to a number of factors including:

1. The oxygen demand of the groundwater was not being met by the existing aeration equipment.

2. The alcohol /glycol oxygen demand was not included in the initial calculations since the analytical data for wells TP-2 and TP3 did not include these analytes. (Groundwater data from Wells TP-2 and TP-3 was the basis of the system design.) (In addition, COD was not initially analyzed to establish the oxygen demand of the contaminated groundwater.) (IESI initiated testing for COD to monitor the loading, O and M, and system performance.)

3. The original design was based upon groundwater flow velocity of 25 ft/yr, which was based on

lithology. (The actual groundwater flow was subsequently found to be approximately 175 ft/yr, or 7x the initial design rate. Travel time to the stream from the trench system is now estimated to be 30 days.)

In response to the initial O & M and monitoring data, system modifications were initiated by IESI on January 15, 2007, and completed February 7, 2007. These modifications were initially documented in the IESI Quarterly Progress Report, dated April 2007. The system design changes were numerous and included:

1. Installation of pumps with higher flow capacities and installation of water level switches to operate the pumps and transfer of groundwater within the trench.

2. The installation of an oxygen generator and oxygen delivery system to meet the oxygen demand of the contaminated groundwater.

3. Installation of new fittings and flow restrictors to the aeration trench laterals for a more balanced nutrient addition across the length of the trench.

4. Upgrade of the site blower from 7.5 hp to 15 hp high pressure, high air capacity positive displacement blower to enable better air distribution across the entire trench area.

5. A Potassium Bromide Tracer Test was performed to establish the residence time and duration of treatment of groundwater within the trench. (At this time, the test data appears to indicate that the groundwater flow rate through the trench system is 1 gal/min.)

6. Continuing to monitor COD in wells and the IM Stream Area System to evaluate the performance and O & M of the Treatment System.

The results provided in Table 6 of the Quarterly Report, dated April 2007, showed dramatic improvements in the effectiveness of treatment of groundwater by the upgraded trench treatment system.

According to a representative from IESI, the data gathered since the last Quarterly Report is showing even better results than in the April Report, which is very encouraging. According to conversations with IESI, the following items were discussed:

1. The IM Trench is performing as an effective bioreactor and is effectively treating the organics in the groundwater entering the system.

2. The retention time of the organics in the trench system is less of a factor now due to the established biological cultures in the trench system and bioreactor properties of the

system.

3. The trench IM system upgrades which include upgrades to the aeration systems, chemical addition adjustments, and increased pumping flow rates appear to be successful and appear sufficient to meet the organic loading and oxygen demand to the system.

4. Operation and Maintenance of the system appears to be a key factor in the success of the system performance. Pumps in the extraction wells and lift station wells need to be pulled and the screens cleaned on a weekly basis to remove biological growth and to provide proper pump and system flow rates in the trench. At this time, it appears that weekly maintenance is required for the upgraded treatment system.
5. The treatment performance of the upgraded system appears to be less affected by the observed increase in hydraulic loading from rainstorms events. Apparently, the upgraded system's bioreactor properties also provide much better treatment during higher hydraulic loading periods.

The future reporting information needs (general and details) of the IM Stream Area Quarterly Reports were discussed with representatives of BEI and IESI. The future IM Stream Area Quarterly Reports will incorporate the salient data (summary chemical and flow data) from the Stream Gauging and Sampling Reports. The summary data tables and figures from the stream monitoring needs to be included in the discussions, evaluations, and findings in the IM Stream Area Quarterly Reports to further evaluate the overall effectiveness of the IM Stream Area System and to establish potential future needs to mitigate the groundwater that is migrating from the Univar site. The above and other future needs associated with the IM Stream Area were provided in an e-mail correspondence to Univar, BEI and IESI, dated June 22, 2007.

Historical Background

The Prillaman Chemical Corporation operated a chemical distribution and solvent recycling, blending, and processing operation at the facility site since it was originally established in 1947 until the sale of the facility in 2001. (Univar USA, Inc. is the current owner of the facility.) No known industrial usage occurred at this property prior to the above period.

The total land area of the facility site comprises approximately 2.5 acres with approximately 1.3 acres occupied by the facility's former offices, warehousing, distribution, solvent recycling, solvent processing, and storage operations. The active area of the facility was constructed over concrete slabs and concrete secondary containment systems with its perimeter covered by weathered asphalt, and enclosed by a 7.5 –foot tall chain link fence toped with three strands of barbed wire, and locked gates. (See Site Description below for further site information.)

The recycling, blending, and processing operations at the facility involved the storage and treatment of hazardous wastes, which were shipped to the facility by industrial and commercial customers. Customers served by the facility included furniture manufacturers, dry cleaning, textile industries, boat manufacturers, printing industries, and associated industries. Hazardous wastes managed at the facility primarily included spent solvent wastes and reclaimed wastes generated by the furniture industry and other manufacturers.

The facility provided hazardous waste management services to its customers under a Permit, which was first issued to the Prillaman Chemical Corporation by the Commonwealth of Virginia in 1984. The facility's Permit was reissued by the DEQ on January 15, 1997, under the authority of the VHWMR and the RCRA Regulations. The facility's Permit authorized hazardous waste management activities (storage and treatment) and also included closure and CA requirements. The facility's Permit requires the Permittee to implement closure, IMs, and CA, as necessary to remediate the site for releases of hazardous waste or hazardous constituents from the facility so to be protective of human health and the environment.

On November 1, 2001, Prillaman Chemical Corporation was sold to Vopak USA, Inc. On July 1, 2002, the Vopak USA, Inc. facility name was changed to Univar USA Inc., the current operator and owner of the facility under the Permit.

Univar initiated closure of the industrial operations and the permitted HWMUs in the fall of 2003. The Permittee discovered contamination of the soils, subsoils, and groundwater at the site during the closure activities required under the facility's Permit.

The facility has not completed RCRA "closure" of the permitted container storage and tank storage HWMUs due to detected HCOCs in soils, subsoils, and groundwater. (See *Closure Activities at Hazardous Waste Storage Areas and Sitewide Sampling Results Report*, dated August 2004, and *Descriptions of Current Conditions Report*, dated May 31, 2006.) The facility is implementing IMs under CA to remediate soils, subsoils, and groundwater, so to address closure requirements of the HWMUs and the CA requirements of the facility's Permit. (See Site Description below for further information regarding the status of the facility "closure.")

Site Description

The Prillaman Chemical Corporation operated a chemical distribution and solvent recycling, blending, and processing operation at the facility site since it was originally established in 1947 until the sale of the facility in 2001. (Univar USA, Inc. is the current owner of the facility.) No known industrial usage occurred at this property prior to the above date.

The total land area of the Univar facility site comprises approximately 2.5 acres with approximately 1.3

acres occupied by the facility's former offices, warehousing, distribution, solvent recycling, solvent processing, and storage operations. The active area of the facility was constructed over concrete slabs and/or concrete secondary containment systems. The perimeter of the facility is covered by weathered asphalt and enclosed by a 7.5 –foot tall chain link fence toped with three strands of barbed wire, and locked gates.

The area surrounding the facility is zoned light industrial/residential. The facility is bordered to the north and east by a forested area. The nearest residential area is north of the facility site and approximately 300 feet from the northern property line.

The facility is located in a hilly area on a topographic high with an approximately 50-foot drop in elevation to the unnamed tributary to Mulberry Creek. The unnamed tributary to Mulberry Creek flows in a southeasterly direction through the forested area approximately 100 feet north and downgradient from the facility fence line. The unnamed tributary to Mulberry Creek is the northern property line of the Univar facility.

The subsoil throughout the facility site has been describes as a "multi-colored micaceous, saprolitic material inter-bedded with quartz-like beds (*QAPP*, 8/16/2005). Bedrock is found at depths ranging from 65 feet below grade (near the high point of the site) to 10 feet below grade near the unnamed tributary.

The groundwater table at the site generally ranges from approximately 30 ft. below grade at the high point of the facility site to within a few feet of the ground surface near the unnamed tributary to Mulberry Creek. On a seasonal basis, several groundwater seeps have been observed at the facility site in very close proximity to the unnamed tributary to Mulberry Creek.

The City of Martinsville supplies water and sewer services to the industrial and residential area near the Univar facility. Martinsville's water is supplied by a city reservoir located approximately 3.5 miles northwest of the facility. No drinking water supplies are known to exist in the vicinity of the facility.

In June 2005, Univar distributed a water well survey form and Univar's CA Fact Sheet No. 1, dated June 24, 2005, to nearby residents and businesses to describe the closure, site investigation, and CA activities at the facility. Univar also conducted a door-to-door survey in July 2005, which verified that there are no known groundwater users in the area near the facility.

In the fall of 2003, Univar ceased industrial operations and initiated the required "closure" of the HWMUs under the facility's Permit.

The facility has not completed RCRA "closure" of the permitted container storage and tank storage HWMUs due to detected HCOCs in soils, subsoils, and groundwater. (See *Closure Activities at*

Hazardous Waste Storage Areas and Sitewide Sampling Results Report, dated August 2004.)

To date, the facility has decontaminated the container storage and tank storage HWMUs by decontamination of all piping, tanks, equipment, and the concrete surfaces in accordance with the facility's Permit Closure Plan. All of the piping, tanks, and equipment were dismantled and removed from the site, and sent off-site for disposal or for recycling, if applicable. The decontaminated steel tanks were cut up and sent off-site for recycling as scrap steel. All hazardous waste generated from closure of the HWMUs was properly managed, manifested, and shipped off-site to a permitted treatment, storage, and disposal (TSD) facility in accordance with the VHWMR and the RCRA Regulations.

All piping, tanks, and equipment associated with the raw material and product storage, manufacturing and processing operations, recycling operations, and hazardous waste management, and other waste management was decontaminated using high-pressure washing with surfactants and followed by high-pressure rinsing. All of the piping, tanks, and equipment were dismantled and removed from the site, and sent off-site for disposal or for recycling, if applicable. The decontaminated steel tanks were cut up and sent off-site for recycling as steel scrap. All concrete surfaces in manufacturing and processing, recycling areas, and hazardous waste management areas were decontaminated using high pressure washing with surfactants and rinsing.

The remaining facilities at the site include: empty buildings, the concrete foundations and secondary containment structures of the container storage and tank storage areas, and weathered asphalt, which surrounds the former manufacturing and processing complex.

The facility has installed numerous groundwater monitoring wells and SVE wells at the facility as part of the closure and CA investigations and the CA IMs. The majority of the installed groundwater monitoring wells, SVE wells, and other IM equipment has been installed and will be installed within the 1.3 acre area of the facility, which is within a 7.5 –foot tall chain link fence toped with three strands of barbed wire, and locked gates.

No Trespassing Signs and warning signs have been posted along the property boundary and along the tributary to Mulberry creek cautioning people to avoid contact with the creek water.

Construction activities for implementation of the *IM Plan (Stream Area)* were initiated in July 2006. This above IM is designed to mitigate the release of contaminated groundwater at the site to surface waters so to protect human health and the environment.

On September 11, 2006, Univar initiated the operation of the *IM Plan (Stream Area*), and the system has operated continuously since September 12, 2006.

Quarterly Reports of the *IM Plan (Stream Area*) are to be submitted to the DEQ to provide an update the O & M of the IM and the progress of the IM in mitigating the release of contaminated groundwater at the site to surface waters.

RCRA CA Milestones

The following RCRA CA milestones have been achieved and reported in EPA's RCRA Info database for this facility:

1. The RCRA Facility Assessment was completed December 27, 1988.

2. The National Corrective Action Prioritization System (NCAPS) ranking for the facility was completed on November 1, 1991. The facility had been assessed and provided a medium priority ranking under NCAPS.

Additional CA documents such as the *Quality Assurance Project Plan, Sampling and Analysis Plan, Surface Water Sampling and Stream Flow Gauging Plan,* and Interim Measures Workplans have been submitted and reviewed, and/or approved as delineated in the information provided above under Current RCRA CA Activities, Past 24 Months.

Environmental Indicator Status

Under the Government Performance and Results Act (GPRA), EPA has set national goals to address high priority RCRA Corrective Action facilities by the year 2008. The Univar site is currently considered a high priority CA facility based upon the site contamination discovered during closure activities under the facility's Permit.

EPA is evaluating two key indicators for each facility: Current Human Exposures under Control and Migration of Contaminated Groundwater under Control.

The current evaluation of Environmental Indicators for this facility is as follows:

- *Human Exposures Controlled Determination:* Additional site information is needed to formally determine if current human exposures are controlled.

- *Release to Groundwater Controlled Determination:* Additional site information is needed to formally determine if Groundwater Releases are controlled. However, at this time, the groundwater at the site is not believed to be controlled based upon the available site information to date.

The facility is currently implementing targeted site investigations and IMs for remediation of soils, subsoils, shallow groundwater, and surface water at the site. The two IMs that have been implemented or that are planned to be implemented at the facility are: 1) *IM Plan (Stream Area)*, and 2) *IM Soil Vapor Extraction (SVE) Design and Work Plan*.

On September 11, 2006, Univar initiated the operation of the *IM Plan (Stream Area*), and the system has operated continuously since September 12, 2006. The design of the *IM Plan (Stream Area) Work Plan* is to mitigate the release of groundwater to surface waters so to protect human health and the environment.

Contaminants

Based on the sampling and testing results of all of the site investigations to date, there are three primary areas within the facility where the contamination is found.

1. Western Portion of the facility. This area is associated with the former above ground raw material and solvent storage tanks. The raw material and solvent storage tanks were not part of the facility's Permit operations; however, the releases from this area is subject to CA.

2. Center Portion of the facility. This area is associated with the former solvent recycling activities (SWMUs), the container storage HWMUs, and the tank storage HWMUs. The solvent recycling operations were not part of the facility's Permit operations; however, any releases from the recycling SWMUs and HWMUs are subject to CA.

3. The Tank Storage HWMUs located on the eastern portion of the facility.

Contaminants have been found in the soils, subsoils, and groundwater on-site and in the unnamed tributary to Mulberry Creek located on the northern edge of the Facility.

The main chemicals identified at the facility include: chlorinated solvents (trichloroethane, methylene chloride, trichloroethene, tetrachloroethene, and their related degradation products), solvents (acetone, alcohols, ketones, ethylbenzene, toluene, xylene, and benzene), and methane. Some of these above chemicals were also detected in five groundwater seeps and surface water samples collected from the creek at the site. The main chemicals that have reached the groundwater seeps and the creek are acetone with lower levels of ketones, trichloroethane, other chlorinated products and degradation products, toluene, and xylene, while lower levels of other volatile organic chemicals (VOCs) have also been detected.

Community Involvement

The facility received conditional approval for the Community Relations Plan (CRP) by letter dated July 21, 2005. The CRP summarizes the specific outreach activities that will be conducted to ensure that interested members of the community and adjacent property owners are advised of the CA activities at the site and are provided an opportunity to be included in decision making process regarding CA at the site. The CRP establishes the methods and manner in which CA information is available for public review. The CRP contains CA Fact Sheet No. 1, dated June 24, 2005.

On September 9, 2005, a public notice was published in *Martinsville Bulletin* of the Class 3 permit modification request and related public meeting at the Martinsville High School on October 25, 2005. In addition, the facility announced the public meeting and the Class 3 permit modification request by letter mailings to the people and organizations on the permitted facility's mailing lists and to property owners that are contiguous to the Univar facility. The public notice was also announced on WHEE radio in Martinsville on September 25, 2005, during the drive time hours in the morning and the evening.

At the public meeting, the Univar representatives and the DEQ representatives provided information associated with the administrative, technical, and regulatory issues and process associated with the Class 3 permit modification request for the following: 1) to install the two IMs at the Univar site, 2) to incorporate the CA Permit Modules and Attachments and requirements of the HSWA of the RCRA, 3) to revoke and reissue the permit for a new 10-year period to conduct CA and complete closure activities at the site.

The public meeting also served to present the Community Relations Plan (CRP) for CA to the general public and the community. The CRP is a component part of CA at the facility and will be a required component part of the facility's forthcoming RCRA Facility Investigation (RFI) Work Plan under the Facility's Permit.

A Public Information/Document Repository has been established at the following location:

Blue Ridge Regional Library
310 East Church Street
P. O. Box 5264
Martinsville, VA 24115

Phone: (276) 632-7125
Fax: (276) 632-1660

The information in the repository provides public access to fact sheets, final copies of work plans, technical reports, and correspondence and other documentation associated with closure and CA at the Univar facility site.

Government and Company Contacts

The Commonwealth of Virginia DEQ is the lead authority for this CA project. Please contact the DEQ project manager listed below for details on this project or the contents of this fact sheet.

DEQ Project Manager

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For more information about EPA's corrective action program, including Environmental Indicators, please visit our site at: www.epa.gov/reg3wcmd/correctiveaction.htm

Fact Sheet Updates

The previous fact sheet was updated January 2007. The next update is scheduled for January 2008. Previous fact sheets may be obtained through the above DEQ contact.